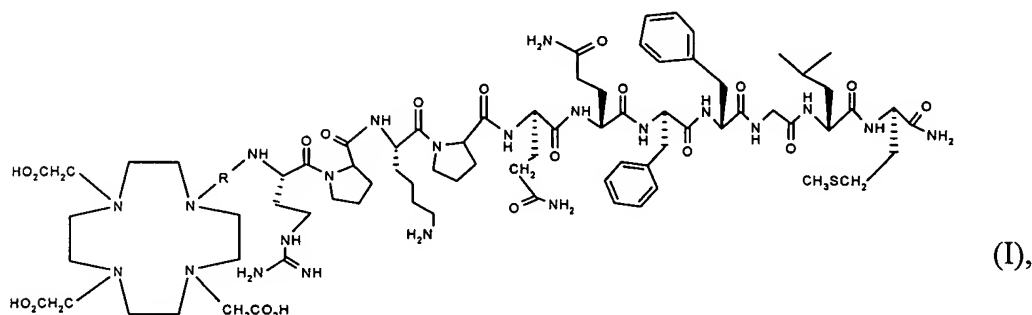


## AMENDMENTS TO THE CLAIMS

**Claim 1. (Currently Amended)** ~~Use of~~ A method of targeting a brain tumor,  
localizing or treating a brain tumor or a satellite lesion thereof in a host afflicted with  
brain tumor, comprising administering to the host a radio-nuclide labelled conjugates  
conjugate of substance P and a chelator molecule, having the abbreviation  
 Chelator-R-Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>-Gln<sup>6</sup>-Phe<sup>7</sup>-Phe<sup>8</sup>-Gly<sup>9</sup>-Leu<sup>10</sup>-Met<sup>11</sup>-NH<sub>2</sub> and  
~~comprising compounds the structure of formula I~~



wherein

R is -CH<sub>2</sub>-C(O)-, -CH(CO<sub>2</sub>H)CH<sub>2</sub>CH<sub>2</sub>-C(O)- or -CH(CO<sub>2</sub>H)CH<sub>2</sub>-C(O)-,

or an analogue of formula I with at least one of the ~~subsequent~~ following modifications in the amino acid sequence of substance P:

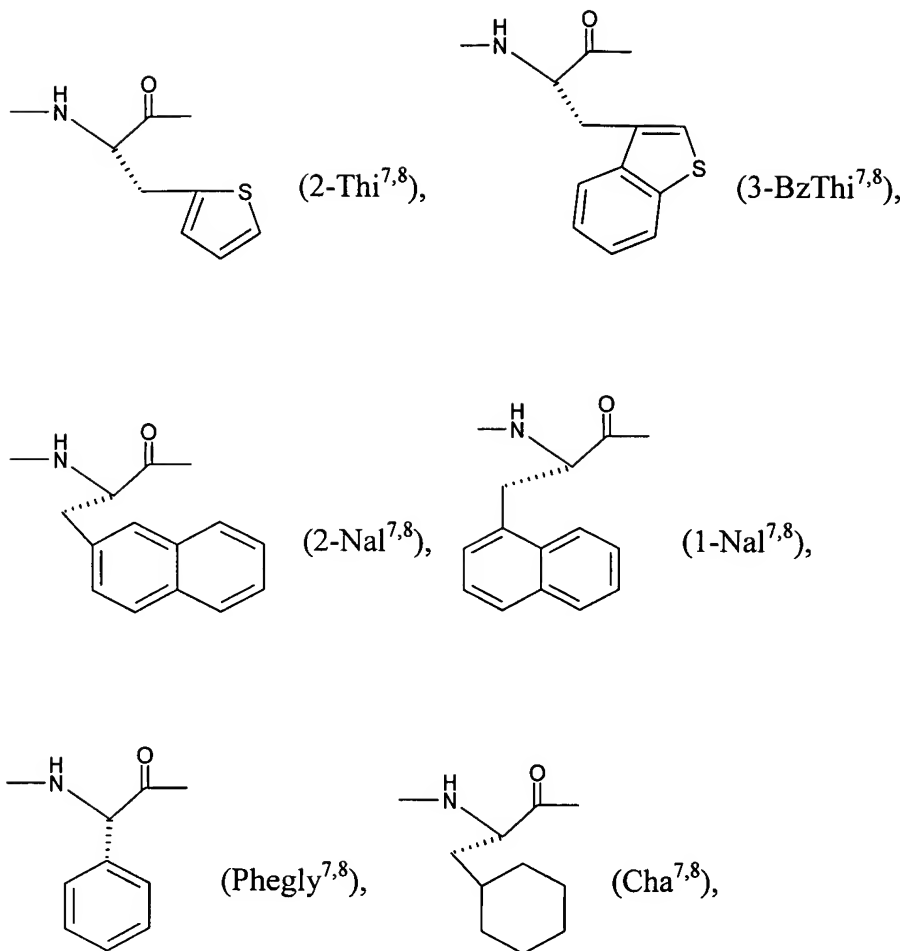
a) replacement of Met<sup>11</sup> by -NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO<sub>2</sub>-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O<sub>2</sub>)<sup>11</sup>),

-NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O)<sup>11</sup>), or -NH-CH[CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>]-C(O)- (hereinafter abbreviated Ile<sup>11</sup>),

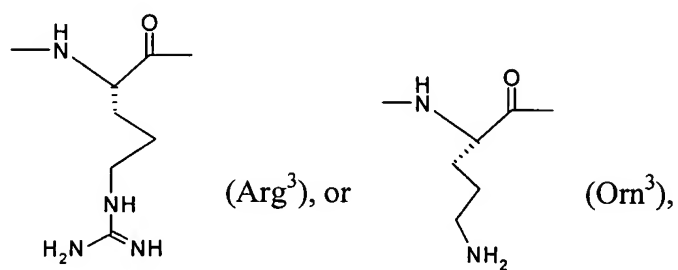
b) replacement of Leu<sup>10</sup> by -NH-CH[CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>]-C(O)- (hereinafter abbreviated Ile<sup>10</sup>),

c) replacement of Gly<sup>9</sup> by -N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar<sup>9</sup>),

d) replacement of Phe<sup>7</sup> or Phe<sup>8</sup> or both Phe<sup>7</sup> and Phe<sup>8</sup> by a residue of formulae



e) replacement of Lys<sup>3</sup> by residue of formulae



f) truncation of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>, or

g) replacement of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup> by -N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar),  
and wherein the conjugate is labelled with a radio-nuclide selected from the group consisting of Actinium-225, Bismut-212, Bismut-213, Lead-203, Copper-64, Copper-67, Gallium-66, Gallium-67, Gallium-68, Lutetium-177, Indium-111, Indium-113, Yttrium-86 and Yttrium-90, Dysprosium-162, Dysprosium-165, Dysprosium-167, Holmium-166, Praseodymium-142, Praseodymium-143, Promethium-149, and Terbium-149;  
~~as active ingredient in radiopharmaceutical or radio-diagnostic formulations for targeting or treating brain tumors, especially gliomas.~~

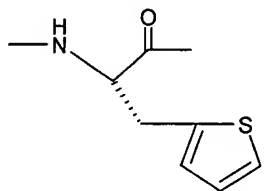
**Claim 2. (Currently Amended)** Use The method according to claim 1, wherein the amino acid sequence ~~in formula I corresponds to formulae~~ of substance P is:

- a) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met-NH<sub>2</sub>,
- b) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>,
- c) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Sar-Leu-Met-NH<sub>2</sub>,
- d) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Thi-Gly-Leu-Met-NH<sub>2</sub>,
- e) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Phe-Gly-Leu-Met-NH<sub>2</sub>,
- f) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Sar-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>,
- g) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Thi-Gly-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>,
- h) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Phe-Gly-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>,
- i) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Thi-Sar-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>,
- j) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Phe-Sar-Leu-Met-NH<sub>2</sub>,
- k) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Phe-Sar-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>
- l) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Thi-Sar-Leu-Met-NH<sub>2</sub>,
- m) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Thi-Sar-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>,
- n) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Thi-Gly-Leu-Met-NH<sub>2</sub>, or
- o) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Thi-Gly-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>.

**Claim 3. (Currently Amended)** Use The method according to claim 1, wherein the compounds ~~compound~~ of formula I ~~comprise~~ comprises in the 11-position of the amino acid sequence of the ~~natural~~ substance P ~~sequence~~ a ~~methioninsulfone~~ methionine sulfone residue of formula  $\text{-NH-CH(CH}_2\text{CH}_2\text{-SO}_2\text{-CH}_3\text{)-C(O)-}$  instead of a ~~methionin~~ methionine residue.

**Claim 4. (Currently Amended)** Use The method according to claim 1, wherein the ~~glycin~~ glycine residue in position 9 of the amino acid sequence of the ~~natural~~ substance P ~~sequence~~ is replaced by a ~~sarcosin~~ sarcosine residue of formula  $\text{-N(CH}_3\text{)-CH}_2\text{-C(O)-}$ .

**Claim 5. (Currently Amended)** Use The method according to claim 1, wherein the phenylalanine residue in the 7- or 8-position or in both said positions of the amino acid sequence of ~~natural~~ substance P ~~sequence~~ is replaced by a 3-(2-thienyl)-alanine residue of formula



**Claim 6. (Currently Amended)** Use The method according to claim 1, wherein the phenylalanine residue in the 8-position of the amino acid sequence of ~~natural~~ substance P ~~sequence~~ is replaced by a 3-(2-thienyl)-alanine and the ~~glycin~~ glycine residue in position 9 is replaced by a sarcosine residue.

**Claim 7. (Currently Amended)** Use The method according to claim 1, wherein the ~~methionin~~ methionine residue in the 11-position of the amino acid sequence of natural substance P ~~sequence~~ is replaced by a ~~methioninsulfone~~ methionine sulfone residue, and the phenylalanine residue in the 8-position of the ~~natural substance P~~ sequence is replaced by a 3-(2-thienyl)-alanine residue, or the ~~glycin~~ glycine residue in position 9 is replaced by a sarcosine residue.

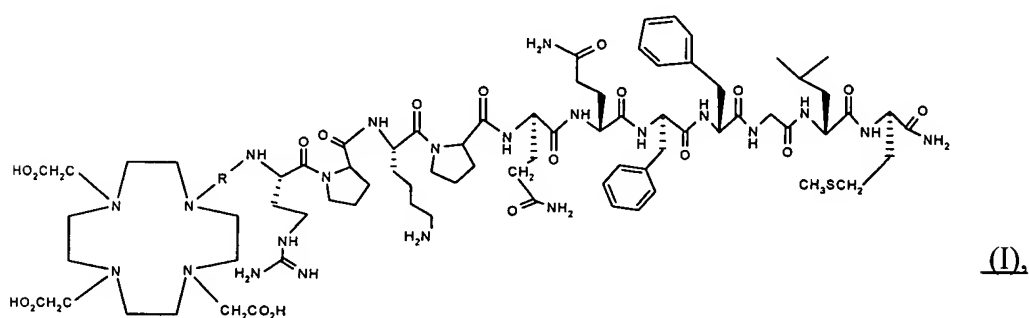
**Claim 8. (Currently Amended)** Use The method according to claim 1, wherein the amino acid sequence in formula I ~~corresponds to formulae~~ is:

- a) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Gly-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>,
- b) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Sar-Leu-Met-NH<sub>2</sub>,
- c) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Thi-Gly-Leu-Met-NH<sub>2</sub>,
- d) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Phe-Gly-Leu-Met-NH<sub>2</sub>,
- e) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Sar-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>,
- f) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Thi-Gly-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>,
- g) Arg-Pro-Lys-Pro-Gln-Gln-Thi-Thi-Gly-Leu-Met-NH<sub>2</sub>, or
- h) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Thi-Sar-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>.

**Claim 9. (Currently Amended)** Use The method according to claim 1, wherein the amino acid sequence in formula I ~~corresponds to formulae~~ is:

- a) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Phe-Sar-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>, or
- b) Arg-Pro-Lys-Pro-Gln-Gln-Phe-Thi-Gly-Leu-Met(O<sub>2</sub>)-NH<sub>2</sub>.

**Claim 10. (Currently Amended)** A method of targeting a brain tumors tumor, localizing or treating a brain tumors and the tumor or a satellite lesions lesion thereof in a host afflicted with brain tumors, e.g. gliomas, in administering tumor, which comprises administering to the host at least one compound-conjugate of substance P and a chelator molecule, having the abbreviation  
Chelator-R-Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>-Gln<sup>6</sup>-Phe<sup>7</sup>-Phe<sup>8</sup>-Gly<sup>9</sup>-Leu<sup>10</sup>-Met<sup>11</sup>-NH<sub>2</sub> and the structure of formula I



wherein

R is -CH<sub>2</sub>-C(O)-, -CH(CO<sub>2</sub>H)CH<sub>2</sub>CH<sub>2</sub>-C(O)- or -CH(CO<sub>2</sub>H)CH<sub>2</sub>-C(O)-,

or an analogue of formula I with at least one of the following modifications in the amino acid sequence of substance P:

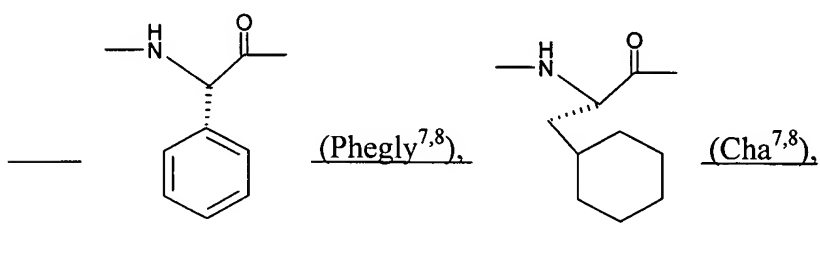
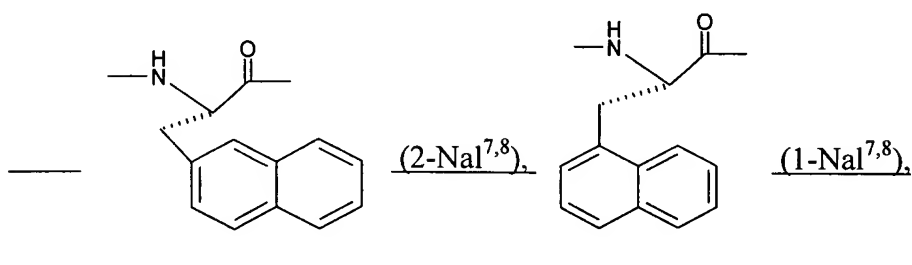
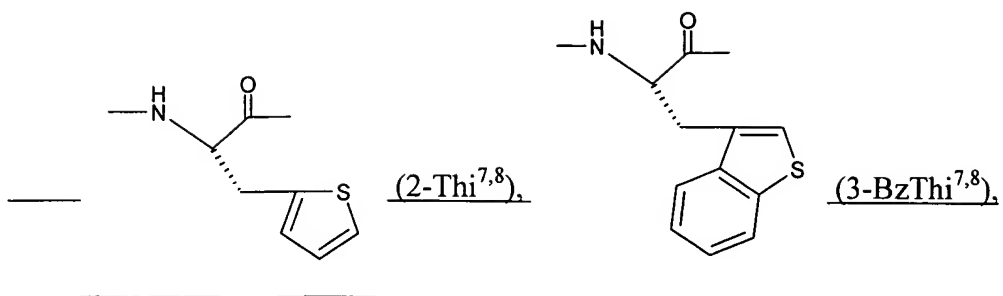
a) replacement of Met<sup>11</sup> by -NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO<sub>2</sub>-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O<sub>2</sub>)<sup>11</sup>),

-NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O)<sup>11</sup>), or -NH-CH[CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>]-C(O)- (hereinafter abbreviated Ile<sup>11</sup>),

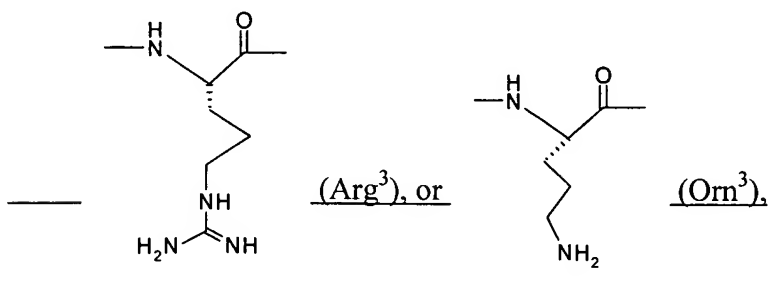
b) replacement of Leu<sup>10</sup> by -NH-CH[CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>]-C(O)- (hereinafter abbreviated Ile<sup>10</sup>),

c) replacement of Gly<sup>9</sup> by -N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar<sup>9</sup>),

d) replacement of Phe<sup>7</sup> or Phe<sup>8</sup> or both Phe<sup>7</sup> and Phe<sup>8</sup> by a residue of formulae



e) replacement of Lys<sup>3</sup> by residue of formulae

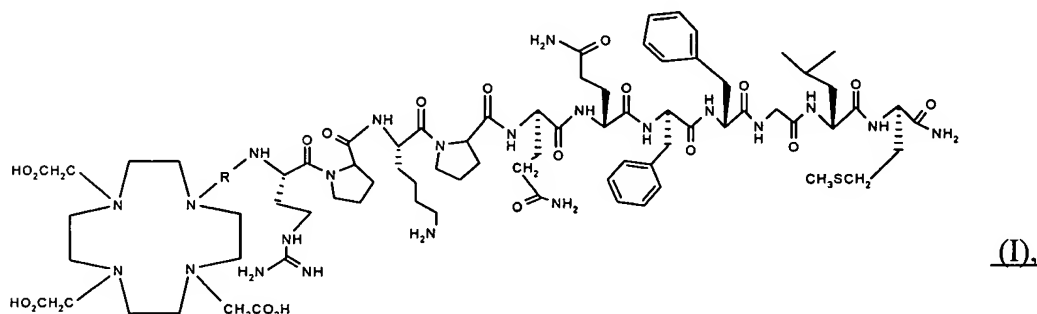


f) truncation of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>, or

g) replacement of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup> by -N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar).

or an analogue of a compound of formula I.

**Claim 11. (Currently Amended)** A therapeutic or diagnostic method for targeting a brain ~~tumors~~ tumor, localizing or treating a brain ~~tumors and the~~ tumor or a satellite ~~lesions~~ lesion thereof in a ~~mammal~~ mammal, comprising administering to a mammal in need of such therapy, an effective amount of a radio-nuclide labelled conjugate of substance P ~~conjugate of and~~ a chelator molecule, having the abbreviation Chelator-R-Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>-Gln<sup>6</sup>-Phe<sup>7</sup>-Phe<sup>8</sup>-Gly<sup>9</sup>-Leu<sup>10</sup>-Met<sup>11</sup>-NH<sub>2</sub> and the structure of formula I



wherein

R is -CH<sub>2</sub>-C(O)-, -CH(CO<sub>2</sub>H)CH<sub>2</sub>CH<sub>2</sub>-C(O)- or -CH(CO<sub>2</sub>H)CH<sub>2</sub>-C(O)-,

or an analogue of formula I with at least one of the following modifications in the amino acid sequence of substance P:

a) replacement of Met<sup>11</sup> by -NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO<sub>2</sub>-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O<sub>2</sub>)<sup>11</sup>),

-NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O)<sup>11</sup>), or -NH-CH[CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>]-C(O)- (hereinafter abbreviated Ile<sup>11</sup>),

b) replacement of Leu<sup>10</sup> by -NH-CH[CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>]-C(O)- (hereinafter abbreviated Ile<sup>10</sup>),

c) replacement of Gly<sup>9</sup> by -N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar<sup>9</sup>),

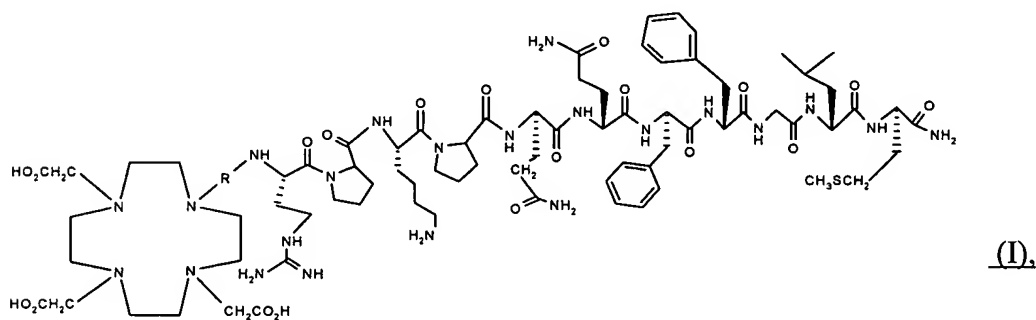




f) truncation of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>, or  
g) replacement of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup> by -  
N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar),  
and wherein the conjugate is labelled with a radio-nuclide selected from the group  
consisting of Actinium-225, Bismut-212, Bismut-213, Lead-203, Copper-64, Copper-67,  
Gallium-66, Gallium-67, Gallium-68, Lutetium-177, Indium-111, Indium-113, Yttrium-  
86 and Yttrium-90, Dyprosium-162, Dysprosium-165, Dysprosium-167, Holmium-166,  
Praseodymium-142, Praseodymium-143, Promethium-149, and Terbium-149.

~~or an analogue thereof.~~

**Claim 12. (Currently Amended)** A method of delivering a radio-nuclide labelled substance P conjugate of formula I or an analogue thereof to a host, comprising administering to a host a radio-nuclide labelled conjugate of substance P conjugate of and  
a chelator molecule, having the abbreviation  
Chelator-R-Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>-Gln<sup>6</sup>-Phe<sup>7</sup>-Phe<sup>8</sup>-Gly<sup>9</sup>-Leu<sup>10</sup>-Met<sup>11</sup>-NH<sub>2</sub> and the  
structure of formula I



wherein

R is -CH<sub>2</sub>-C(O)-, -CH(CO<sub>2</sub>H)CH<sub>2</sub>CH<sub>2</sub>-C(O)- or -CH(CO<sub>2</sub>H)CH<sub>2</sub>-C(O)-,  
or an analogue of formula I with at least one of the following modifications in the amino  
acid sequence of substance P:

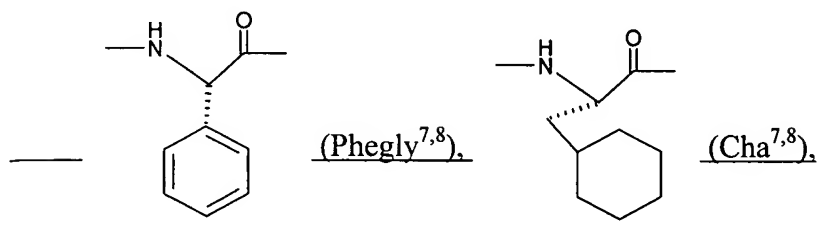
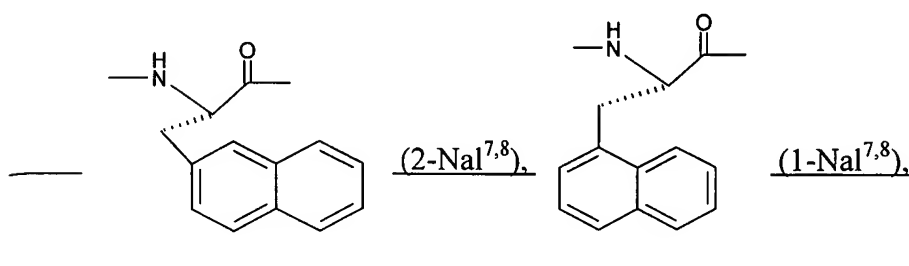
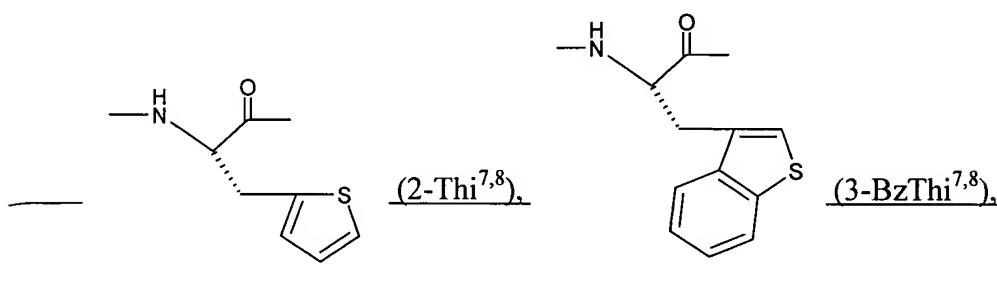
a) replacement of Met<sup>11</sup> by -NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO<sub>2</sub>-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O<sub>2</sub>)<sup>11</sup>),

-NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O)<sup>11</sup>), or -NH-CH[CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>]-C(O)- (hereinafter abbreviated Ile<sup>11</sup>),

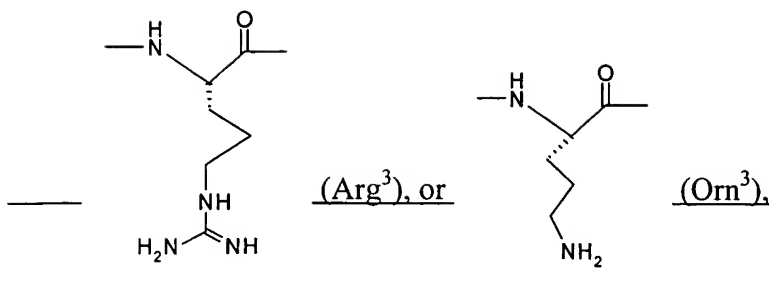
b) replacement of Leu<sup>10</sup> by -NH-CH[CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>]-C(O)- (hereinafter abbreviated Ile<sup>10</sup>),

c) replacement of Gly<sup>9</sup> by -N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar<sup>9</sup>),

d) replacement of Phe<sup>7</sup> or Phe<sup>8</sup> or both Phe<sup>7</sup> and Phe<sup>8</sup> by a residue of formulae

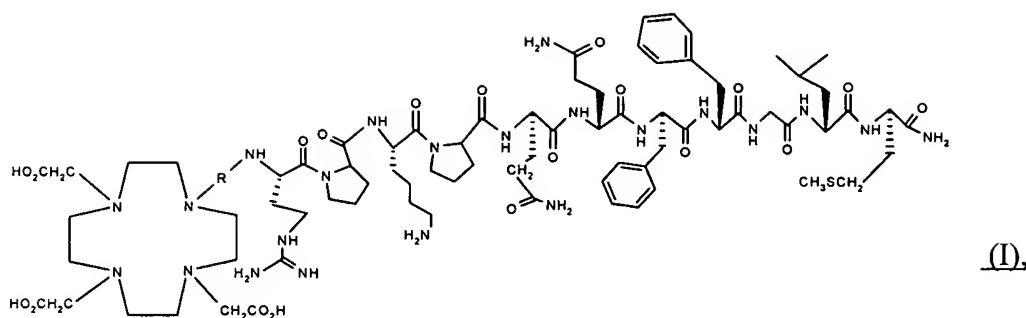


e) replacement of Lys<sup>3</sup> by residue of formulae



f) truncation of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>, or  
g) replacement of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup> by -  
N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar),  
and wherein the conjugate is labeled with a radio-nuclide selected from the group  
consisting of Actinium-225, Bismut-212, Bismut-213, Lead-203, Copper-64, Copper-67,  
Gallium-66, Gallium-67, Gallium-68, Lutetium-177, Indium-111, Indium-113, Yttrium-  
86 and Yttrium-90, Dysprosium-162, Dysprosium-165, Dysprosium-167, Holmium-166,  
Praseodymium-142, Praseodymium-143, Promethium-149, and Terbium-149,  
or an analogue thereof.

**Claim 13. (Currently Amended)** A method Use of a radio-nuclide labelled substance  
P-conjugate of formula I or an analogue thereof for the manufacture of a medicament  
useful for the detection and therapeutic treatment of a brain tumors and tumor or satellite  
lesions lesion thereof in an a mammal, such as a human, which comprises mixing a radio-  
nuclide labelled conjugate of substance P and a chelator molecule, having the  
abbreviation  
Chelator-R-Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>-Gln<sup>6</sup>-Phe<sup>7</sup>-Phe<sup>8</sup>-Gly<sup>9</sup>-Leu<sup>10</sup>-Met<sup>11</sup>-NH<sub>2</sub> and the  
structure of formula I



wherein

R is  $-\text{CH}_2-\text{C}(\text{O})-$ ,  $-\text{CH}(\text{CO}_2\text{H})\text{CH}_2\text{CH}_2-\text{C}(\text{O})-$  or  $-\text{CH}(\text{CO}_2\text{H})\text{CH}_2-\text{C}(\text{O})-$ ,

or an analogue of formula I with at least one of the following modifications in the amino acid sequence of substance P:

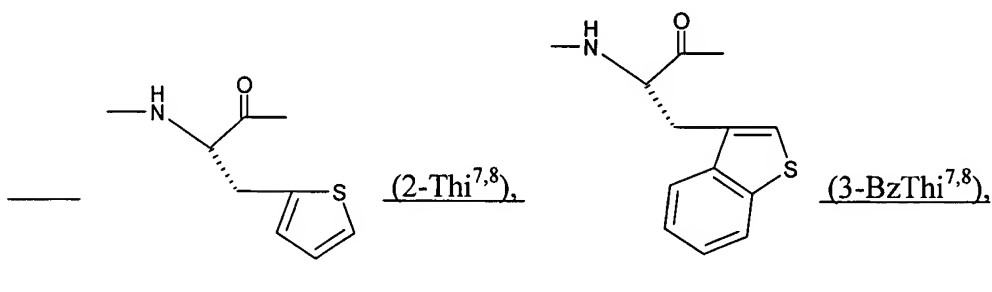
a) replacement of Met<sup>11</sup> by  $-\text{NH}-\text{CH}(\text{CH}_2\text{CH}_2-\text{SO}_2-\text{CH}_3)-\text{C}(\text{O})-$  (hereinafter abbreviated Met(O<sub>2</sub>)<sup>11</sup>),

$-\text{NH}-\text{CH}(\text{CH}_2\text{CH}_2-\text{SO}-\text{CH}_3)-\text{C}(\text{O})-$  (hereinafter abbreviated Met(O)<sup>11</sup>), or  $-\text{NH}-\text{CH}[\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3]-\text{C}(\text{O})-$  (hereinafter abbreviated Ile<sup>11</sup>),

b) replacement of Leu<sup>10</sup> by  $-\text{NH}-\text{CH}[\text{CH}(\text{CH}_3)\text{CH}_2\text{CH}_3]-\text{C}(\text{O})-$  (hereinafter abbreviated Ile<sup>10</sup>),

c) replacement of Gly<sup>9</sup> by  $-\text{N}(\text{CH}_3)-\text{CH}_2-\text{C}(\text{O})-$  (hereinafter abbreviated Sar<sup>9</sup>),

d) replacement of Phe<sup>7</sup> or Phe<sup>8</sup> or both Phe<sup>7</sup> and Phe<sup>8</sup> by a residue of formulae



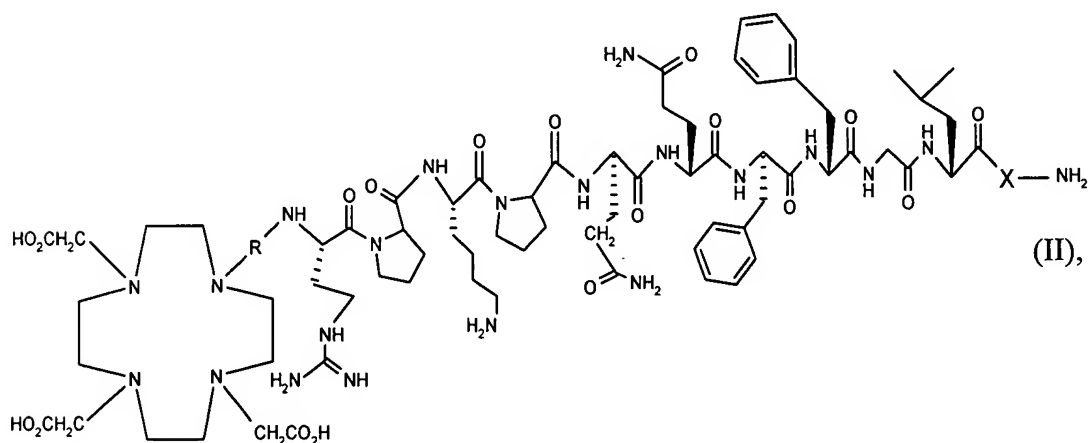


with a pharmaceutical carrier.

**Claims 14-16. (Cancelled)**

**Claim 17. (New)** A conjugate of a substance P analogue and a chelator molecule, having the abbreviation

Chelator-R-Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>-Gln<sup>6</sup>-Phe<sup>7</sup>-Phe<sup>8</sup>-Gly<sup>9</sup>-Leu<sup>10</sup>-X<sup>11</sup>-NH<sub>2</sub> and the structure of formula II



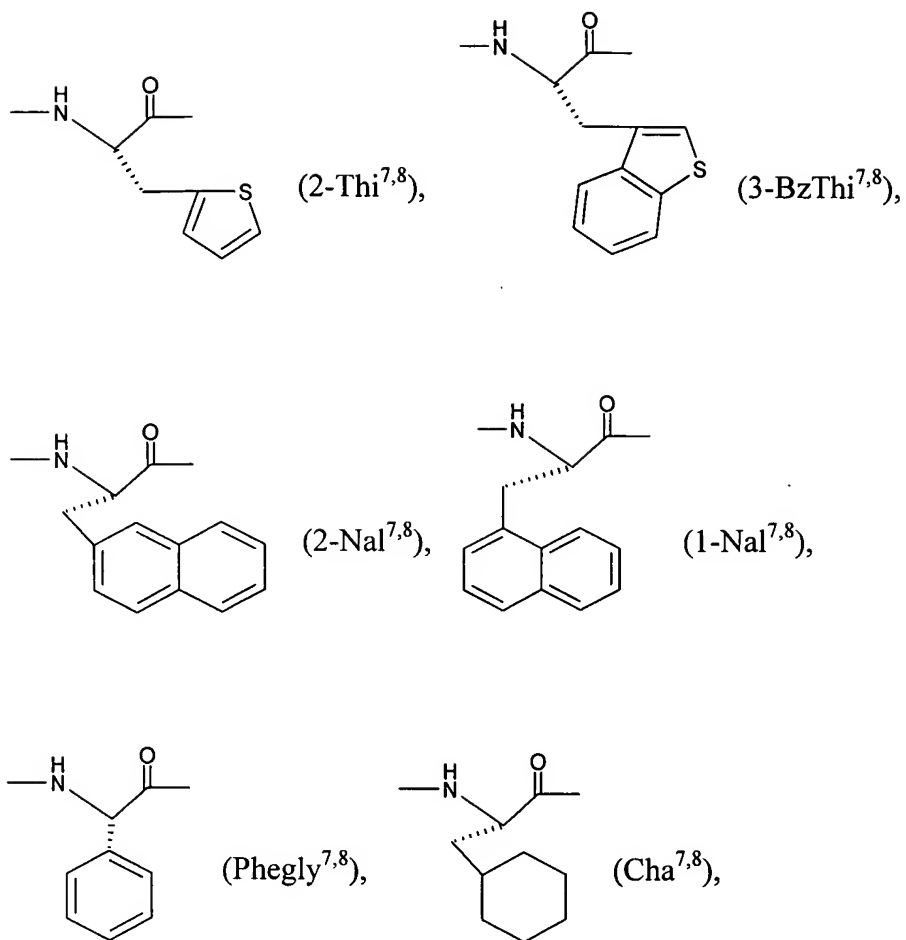
wherein

R is -CH<sub>2</sub>-C(O)-, -CH(CO<sub>2</sub>H)CH<sub>2</sub>CH<sub>2</sub>-C(O)- or -CH(CO<sub>2</sub>H)CH<sub>2</sub>-C(O)- and

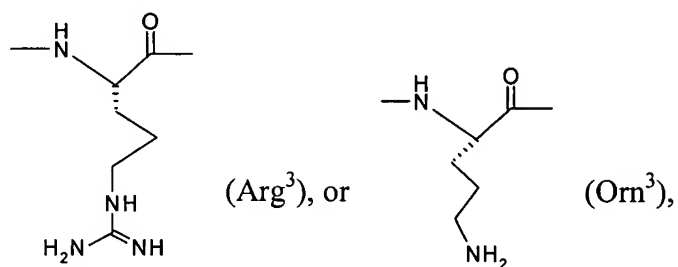
X is -NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO<sub>2</sub>-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O<sub>2</sub>)<sup>11</sup>), -NH-CH(CH<sub>2</sub>CH<sub>2</sub>-SO-CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Met(O)<sup>11</sup>), or -NH-CH[CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>]-C(O)- (hereinafter abbreviated Ile<sup>11</sup>),

or an analogue of formula II with at least one of the following modifications in the amino acid sequence of substance P analogue:

- replacement of Leu<sup>10</sup> by -NH-CH(CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>)-C(O)- (hereinafter abbreviated Ile<sup>10</sup>),
- replacement of Gly<sup>9</sup> by -N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar<sup>9</sup>),
- replacement of Phe<sup>7</sup> or Phe<sup>8</sup> or both Phe<sup>7</sup> and Phe<sup>8</sup> by a residue of formulae



d) replacement of Lys<sup>3</sup> by residue of formulae



e) truncation of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup>, or  
 f) replacement of 1 to 5 amino acids of the sequence Arg<sup>1</sup>-Pro<sup>2</sup>-Lys<sup>3</sup>-Pro<sup>4</sup>-Gln<sup>5</sup> by  
 -N(CH<sub>3</sub>)-CH<sub>2</sub>-C(O)- (hereinafter abbreviated Sar),



and wherein the conjugate is unlabelled or labeled with a radio-nuclide selected from the group consisting of Actinium-225, Bismut-212, Bismut-213, Lead-203, Copper-64, Copper-67, Gallium-66, Gallium-67, Gallium-68, Lutetium-177, Indium-111, Indium-113, Yttrium-86 and Yttrium-90, Dysprosium-162, Dysprosium-165, Dysprosium-167, Holmium-166, Praseodymium-142, Praseodymium-143, Promethium-149, and Terbium-149.

**Claim 18. (New)** The conjugate of claim 17 wherein  
X is  $\text{-NH-CH(CH}_2\text{CH}_2\text{-SO}_2\text{-CH}_3\text{)-C(O)-}$  (hereinafter abbreviated  $\text{Met(O}_2\text{)}^{11}$ ).

**Claim 19. (New)** A composition comprising at least one pharmaceutical carrier and at least one conjugate according to claim 17.

**Claim 20. (New)** A composition comprising at least one pharmaceutical carrier and at least one conjugate according to claim 18.

**Claim 21. (New)** A method of targeting a brain tumor or treating a brain tumor in a host afflicted with brain tumor, comprising administering to the host a conjugate of claim 17.

**Claim 22. (New)** A method of targeting a glioma or treating a glioma in a host afflicted with glioma, comprising administering to the host a conjugate of claim 17.

**Claim 23. (New)** A method of targeting a brain tumor or treating a brain tumor in a host afflicted with brain tumor, comprising administering to the host a conjugate of claim 18.

**Claim 24. (New)** A method of targeting a glioma or treating a glioma in a host afflicted with glioma, comprising administering to the host a conjugate of claim 18.

**Claim 25. (New)** The method of claim 21, wherein the conjugate is administered by loco-regional application to a tumor center or into a resection cavity of the host.

**Claim 26. (New)** The method of claim 22, wherein the conjugate is administered by loco-regional application to a tumor center or into a resection cavity of the host.

**Claim 27. (New)** The method of claim 23, wherein the conjugate is administered by loco-regional application to a tumor center or into a resection cavity of the host.

**Claim 28. (New)** The method of claim 24, wherein the conjugate is administered by loco-regional application to a tumor center or into a resection cavity of the host.

**Claim 29. (New)** A method for the manufacture of a radiopharmaceutical or radio-diagnostic formulation useful for targeting a brain tumor or treating a brain tumor in a host afflicted with brain tumor, which comprises a radio-nuclide labeled conjugate of claim 17.

**Claim 30. (New)** A method for the manufacture of a radiopharmaceutical or radio-diagnostic formulation useful for targeting a brain tumor or treating a brain tumor in a host afflicted with brain tumor, which comprises a radio-nuclide labeled conjugate of claim 18.